

REMARKS

In the Office Action, claims 1-9, 37-53, and 92-106 were pending. Claims 1-9 and 37-53 were rejected. Applicants acknowledge with appreciation the allowance of claims 92-106. In this response, no claims have been added or cancelled. Claims 1, 4, 7, 37, 45, and 53 have been amended without adding any new matter. Thus, claims 1-9, 37-53, and 92-106 are pending. Reconsideration of this application, in light of the following remarks, is respectfully requested.

The Examiner objected to informalities within the specification. In response, the Applicants have amended the specification accordingly. The amendments are supported in the specification as originally filed. Thus, the Applicants respectfully request withdrawal of the objection to the specification.

The Examiner rejected claims 1, 3, 4, 6, 7, and 9 under 35 U.S.C. § 103(a) as being unpatentable over “Fast Segmentation of the JPEG Compressed Documents,” *Journal of Electronic Imaging, Vol. 7(2), April 1998* by Queiroz et al. (hereinafter “Queiroz”) in view of the JPEG 2000 Specification. The Applicants respectfully disagree with the rejection because the references, alone or in combination, fail to describe each and every limitation as claimed in claim 1, 3, 4, 6, 7, and 9.

Queiroz, describes a method for segmenting a JPEG formatted image in the compressed domain (Queiroz, sections 1.1 and 2.1). The segmentation technique calculates the number of bits required to encode an 8x8 block of pixels of the original image (Queiroz, section 3). The 8x8 block is used as the measuring unit because a JPEG utilizes a discrete cosine transform (DCT) which only operates on 8x8 blocks of pixels (Queiroz, section 2.1). An activity map is generated which corresponds to each 8x8 block

of the original image in the image domain (Queiroz, section 3). From the activity map generated from data gathered in the image domain, Queiroz performs imaging operations on a bitstream (Queiroz, section 4).

The JPEG 2000 Specification describes the format of an image bitstream. The bitstream includes header bits and corresponding image description bits (Table 1, Specification, Page 14). However, the JPEG 2000 specification merely describes the standard format which is required to make a JPEG 2000 image bitstream compliant with standard.

The Applicants respectfully submit that the references, alone or in combination, fail to describe or suggest “generating a granular multi-scale entropy distribution using multi-scale information obtained from a header of a compressed bitstream; and applying one or more image processing operations based on the granular multi-scale entropy distribution.” Whereas the JPEG 2000 specification describes the required format and data elements of a JPEG 2000 compliant bitstream, Queiroz only describes an image processing technique that operates on a JPEG bitstream. Thus, the technique of Queiroz was not designed to operate on images from the JPEG 2000 format. Further, the technique creates entropy distributions for local 8x8 blocks because the JPEG format utilizes a DCT of image data from the image domain, and not multi-scale transforms of multi-scale image data. As such, Queiroz fails to describe or suggest the creation of a multi-scale entropy distribution utilizing multi-scale information obtained from a header. Because Queiroz fails to describe or suggest generating a multi-scale entropy distribution, Queiroz must also logically fail to apply processing operations based on the multi-scale entropy distribution.

Therefore, neither Queiroz nor the JPEG 2000 Specification, alone or in combination, teaches “generating a granular multi-scale entropy distribution using multi-scale information obtained from a header of a compressed bitstream” or “applying one or more image processing operations based on the granular multi-scale entropy distribution,” as claimed in claim 1.

Thus, the Applicants respectfully request withdrawal of the rejection of claim 1 under § 103 by Queiroz in view of the JPEG 2000 specification. Independent claims 4 and 7 contain similar language and features as claim 1. Therefore, for similar reasons, Applicants respectfully submit that claims 4 and 7 are not obvious under 35 U.S.C. § 103(a) over Quieroz in view of the JPEG 2000 specification. Further, claims 3, 6, and 9 depend from claims 1, 4, and 7 respectively, and include additional features and limitations. Thus, for at least the same reasons discussed above, claims 3, 6, 9 are also not rendered obvious under 35 U.S.C. § 103(a). The Applicants respectfully request withdrawal of the rejections.

The Examiner further rejected claims 2, 5, and 8 under 35 U.S.C. § 103(a) as being unpatentable over Queiroz in view of the JPEG 2000 specification, and further in view of WO 00/01153 Jändel et al. (hereinafter “Jändel”). The Applicants respectfully disagree with the rejections

As discussed above, Queiroz and the JPEG 2000 specification fail to describe or suggest “generating a granular multi-scale entropy distribution using information obtained from a header of a compressed bitstream; and applying one or more image processing operations based on the granular multi-scale entropy distribution,” as claimed in independent claim 1, and similarly in claims 4 and 7. However, Jändel merely describes encoding and decoding selected regions of an image (Jändel, page 3, line 4 to page 4, line

10). As such Jändel also fails to describe or suggest the missing limitations discussed above.

Thus, the references alone, or in combination, fail to describe or suggest each and every element as claimed in claims 1, 4, and 7. Claims 2, 5, and 8 depend from claims 1, 4, and 7, and claim additional features and limitations to. Therefore, for at least the same reasons, claims 2, 5, and 8 are not rendered obvious under 35 U.S.C. § 103(a) over Queiroz, the JPEG 2000 specification, and Jändel. The Applicants respectfully request withdrawal of the rejections.

The Examiner further rejected claims 37-44 and 45-53 for reasons similar to the rejection of claim 2. However, as discussed above, the Applicants submit that claim 2 is not rendered obvious in view of the references cited. Thus, for reasons similar to the reasons discussed above, the Applicants submit that claims 37-44 and 45-53 have overcome the applicable rejections under 35 U.S.C. § 103. The Applicants respectfully request withdrawal of the rejections.

CONCLUSION

In view of the foregoing, Applicant respectfully submits that applicable rejections and objections have been overcome.

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Respectfully submitted,
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